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## TRANSMITTAL FORM

(to be used for all correspondence after initial filing)

		Application Number	09/954,571
		Filing Date	September 11, 2001
		First Named Inventor	Kenneth R. CHIEN
		Group Art Unit	1646
		Examiner Name	UNKNOWN
Total Number of Pages in This Submission	7	Attorney Docket Number	6627-PA0123

### ENCLOSURES (check all that apply)

<input type="checkbox"/> Fee Transmittal Form	<input type="checkbox"/> Assignment Papers (for an Application)	<input type="checkbox"/> After Allowance Communication to Group
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### SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm or Individual name	Colleen J. McKiernan	Reg. No. 48,570
Signature		
Date	August 6, 2002	

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PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re Application of )  
Kenneth R. CHIEN et al. ) FOR: HIGH EFFICIENCY CARDIAC  
Serial No.: 09/954,571 ) GENE TRANSFER  
Filed: September 11, 2001 )  
                            ) Group  
                            ) Art Unit: 1646

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INFORMATION DISCLOSURE STATEMENT  
UNDER 37 C.F.R. §§ 1.97 and 1.98

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Attention: Examiner

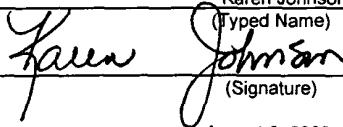
Dear Sir:

Applicants submit herewith references of which they are aware, which they believe may be material to patentability of the invention disclosed and claimed in the above-cited application and with respect to which there may be a duty to disclose in accordance with 37 C.F.R. § 1.56.

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Commissioner for Patents, Washington, D.C. 20231 on:

August 6, 2002  
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Karen Johnson  
(Typed Name)

  
(Signature)

August 6, 2002  
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Applicants are submitting herewith copies of the references which are set forth on the attached Form PTO/SB/08A. As all relevant parts of the references are in the English language, no explanation of the references is provided herein.

This Information Disclosure Statement is submitted within three (3) months of the filing date of the above-cited application or of the date of entry into the national phase of the application or prior to the mailing date of a first Office Action thereon, whichever has occurred last, such that no fee is required.

Further, while the references provided in this Information Disclosure Statement may be material to patentability pursuant to 37 C.F.R. § 1.56, it is not intended to constitute an admission that any reference referred to herein is prior art for this invention unless specifically designated as such.

Also, in accordance with 37 C.F.R. § 1.97(g), the filing of this Information Disclosure Statement shall not be construed to mean that a search has been made or that no other material information as defined in 37 C.F.R. § 1.56(a) exists.

Respectfully submitted,

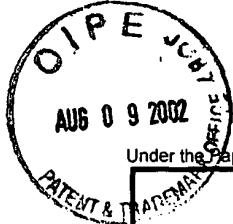
Dated: August 6, 2002

By: Colleen J. McKiernan  
Colleen J. McKiernan  
Patent Agent for Applicants  
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Docket No.: 6627-PA0123



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 Substitute for form 1449A/PTO  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  (use as many sheets as necessary)				<b>Complete if Known</b>	
				Application Number	09/954,571
				Filing Date	September 11, 2001
				First Named Inventor	Kenneth CHIEN
				Group Art Unit	1646 <span style="float: right;">RECI</span>
				Examiner Name	Unknown <span style="float: right;">AUG 1</span>
Sheet	1	of	4	Attorney Docket Number	6627-PA0123 <span style="float: right;">TECH CENT</span>

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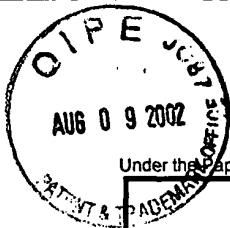
FOREIGN PATENT DOCUMENTS						
Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document			Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY
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Application Number 09/954,571

Filing Date September 11, 2001

First Named Inventor Kenneth CHIEN

Group Art Unit 1646

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## OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS

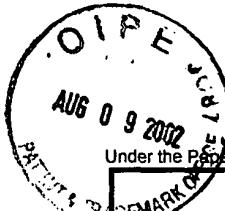
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	1	Arber, S., et al (1997) MLP-deficient mice exhibit a disruption of cardiac cytoarchitectural organization, dilated cardiomyopathy, and heart failure. <i>Cell</i> . <b>88</b> :393-403.	
	2	Christensen, G. et al. (2000) High-efficiency, long-term cardiac expression of foreign genes in living mouse embryos and neonates. <i>Circulation</i> . <b>101</b> :178-84.	
	3	Coral-Vazquez, R. et al. (1999) Disruption of the sarcoglycan-sarcospan complex in vascular smooth muscle: A novel mechanism for cardiomyopathy and muscular dystrophy. <i>Cell</i> . <b>98</b> :465-74.	
	4	French, B.A. et al. (1994) Direct <i>in vivo</i> transfer into porine myocardium using replication-deficient adenoviral vectors. <i>Circulation</i> . <b>90</b> :2414-24.	
	5	Frommes, Y. et al. (1999) Gene delivery in the myocardium by intrapericardial injection. <i>Gene Ther</i> . <b>6</b> :683-8.	
	6	Greelish, J.P. et al. (1999) Stable restoration of the sarcoglycam complex in dystrophic muscle perfused with histamine and recombinant adeno-associated viral vector. <i>Nat. Med.</i> <b>5</b> :439-43.	
	7	Gutzman, R.J. et al. (1993) Efficient gene transfer into myocardium by direct injection of adenovirus vectors. <i>Circ. Res.</i> <b>73</b> : 1202-7.	
	8	Hajjar, R.J. et al. (1998) Modulation of ventricular function through gene transfer <i>in vivo</i> . <i>Proc. Natl. Acad. Sci., USA</i> . <b>95</b> :5251-5256.	

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Filing Date September 11, 2001

First Named Inventor Kenneth CHIEN

Group Art Unit 1646

Examiner Name Unknown

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Sheet 3 of 4 Attorney Docket Number 6627-PA0123

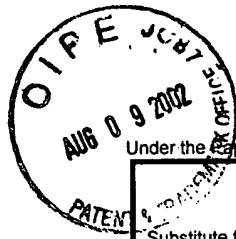
	9	Holt, K.M. et al. (1998) Functional rescue of the sarcoglycam complex in BIO 14.6 hamster using delta-sarcoglycan gene transfer. <i>Mol. Cell.</i> 1:841-8	
	10	Johnson, L.G. (1992) Efficiency of gene transfer for restoration of normal airway epithelial function in cystic fibrosis. <i>Nat. Genet.</i> 2:21-5.	
	11	Kaplitt, M.G. et al. (1996) Long-term gene transfer in porcine myocardium after coronary infusion of an adeno-associated virus vector. <i>Ann. Thorac. Surg.</i> 62:1669-76.	
	12	Maeda, Y., et al. (1998) Efficient gene transfer into cardiac myocytes using adeno-associated virus (AAV) vectors. <i>J. Mol. Cell. Cardiol.</i> 30:1341-8.	
	13	Maurice, J., et al. (1999) Enhancement of cardiac function after adenoviral-mediated <i>in vivo</i> intracoronary beta-2 adrenergic receptor gene delivery. <i>J. Clin. Invest.</i> 104:21-9.	
	14	Miyamoto, M.I., et al. (2000) Adenoviral gene transfer of SERCA2a improves left-ventricular function in aortic-banded rats in transition to heart failure. <i>Proc. Natl. Acad. Sci. USA.</i> 97:793-98.	
	15	Mohri, H. et al. (1969) Method of surface-induced deep hypothermia for open-heart surgery in infants. <i>J. Thorac. Cardiovasc. Surg.</i> 58:262-70.	
	16	Nigro, V., et al. (1997) Identification of the Syrian hamster cardiomyopathy gene. <i>Hum. Mol. Genet.</i> 6:601-7.	
	17	Ryoke, T., et al. (1999) Progressive cardiac dysfunction and fibrosis in the cardiomyopathic hamster and effects of growth hormone and angiotensin-converting enzyme inhibition. <i>Circulation.</i> 100:1734-43.	
	18	Sakamoto, A., et al. (1997) Both hypertrophic and dilated cardiomyopathies are caused by mutation in the same gene, delta-sarcoglycan, in hamster: An animal model of disrupted dystrophin-associated glycoprotein complex. <i>Proc. Natl. Acad. Sci. USA.</i> 94:13873-8.	

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First Named Inventor Kenneth CHIEN

Group Art Unit 1646

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	19	Shah, A.S. et al. (2001) In vivo ventricular gene delivery of a β-adrenergic receptor kinase inhibitor to the failing heart reverses cardiac dysfunction. <i>Circulation</i> 103:1311.	
	20	Svensson, E.C., et al. (1999) Efficient and stable transduction of cardiomyocytes after intramyocardial infection or intracoronary perfusion with recombinant adeno-associated virus vectors. <i>Circulation</i> . 99:201-5.	
	21	Toyofuku, E., et al. (1994) Amino acids Glu2 to Ile 18 in the cytoplasmic domain of phospholamban are essential for functional association with the Ca <sup>2+</sup> -ATPase of the sarcoplasmic reticulum. <i>269</i> :3088-94.	
	22	Xiao, X., Li, J., and Samulski, R.J. (1998) Production of high-titer recombinant adeno-associated virus vectors in the absence of helper virus. <i>J. Virol.</i> 72:2224-32.	

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